Albuquerque's Wastewater Division Increases Pollution Prevention Efforts

Pollution prevention is becoming a key component in Albuquerque's management of wastewater. The city's Wastewater Division has focused most of its pollution prevention efforts on small to medium sized businesses. They monitored and regulated the large industrial companies, with less emphasis on education, technical assistance, and pollution prevention techniques.

In January 2000, their focus shifted more towards pollution prevention with Albuquerque's selection as the first city to participate in the Environment Protection Agency's Excellence and Leadership Project (Project XL). Project XL's purpose is to develop, improve, and share methods that effectively protect the environment and public health. Albuquerque's Project XL pilot is now in its third year and won a national "Most Valuable Pollution Prevention Award" in September 2002.

The Pretreatment/Pollution Prevention Section now provides more technical assistance and education to a wider variety of wastewater utility customers. They are collaborating with other pollution prevention groups such as New Mexico Green Zia Environmental Excellence and Waste Management Education and Resource Consortium, as well as, the Environment Protection Agency, to assist companies with pollutant reduction methods.

By sampling wastewater streams in a designated sewer sub-basin area, they are able to identify high levels of any of thirteen substances (listed in Figure 1) they are particularly concerned about reducing. According to Brenda Gutierrez, P2 Specialist, when they have a "hit", or high level, of one of these substances, they sample upstream until they isolate the source. This allows them to target businesses in the sub-basin area that are not reducing or eliminating these pollutant substances prior to release from their business. Typically, these are small to medium sized non-permitted businesses that do not realize the impact their discharge has on the concentration of pollutants in Albuquerque's wastewater stream. By using the sub-basin data, P2 staff provides specific education and technical assistance to these

businesses. For example, they have worked extensively with dentists to reduce silver discharges and with jewelers to reduce acid and copper wastes.

By 2001, through outreach efforts alone, they reached their project targets of a 10 to 25% reduction in most of the thirteen substances. Figure 1 shows a two-year comparison of these substances in the influent, the wastewater stream entering the treatment plant.

	1999/2000 (Year 1)	2000/2001 (Year 2)	
Parameter	Parts Per Billion (ppb)	Parts Per Billion ppb	Influent Reduction
Aluminum	1907	1130	41%
Cadmium	2.5	2.2	11%
Chromium	8	7	12%
Copper	76	13.7	82%
Cyanide	Non-detect	Non-detect	Non-detect
Fluoride	1.8	1.64	9%
Lead	27.3	20.2	26%
Mercury	Non-detect	Non-detect	Non-detect
Molybdenum	Non-detect	Non-detect	Non-detect
Nickel	13.5	12.3	9%
Selenium	Non-detect	Non-detect	Non-detect
Silver	17.8	8.15	54%
Zinc	145	98.4	32%

Figure 1. Analytical data is from the City's Water Quality Laboratory.
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According to Bob Hogrefe, Albuquerque's Project XL manager, 2001/2002 (Year 3) data continues to show a decrease in aluminum, fluoride, and lead, while copper, silver, and zinc remained close to Year 2 levels. Year 3 cadmium and nickel levels went up slightly from Year 2, but remained lower than Year 1 levels. Cyanide, mercury, molybdenum, and selenium remained at non-detected levels.

Project XL also exchanges a permit for a Pollution Prevention Memorandum of Understanding (MOU) with permitted organizations that consistently meet all wastewater compliance requirements. An MOU still requires organizations to meet EPA discharge limits, but it allows companies that already do that well, to allocate resources to additional P2 programs, rather than to cumbersome regulatory

requirements. The seven organizations that have signed MOUs are CTS Wireless Components, Inc., several jewelry manufacturers, Hutch's Casting Company, Kabana, Inc., and Shubes Manufacturing, Inc., the University of New Mexico (UNM), UNM Health Science Center Hospital, and Zia Laundry.

According to the department's May 2003, Project XL Status Report, "Project XL has allowed Industrial Pretreatment to shift resources from less productive traditional requirements towards innovative P2 (pollution prevention) activities that yield superior environmental results." They plan to continue with and increase pollution prevention efforts so that pollution free water returns into the Rio Grande River.

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